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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 08/968,208 | 11/12/1997 | RUSSELL HIGUCHI | 9397 | 8271 |

22896 7590 09/03/2004

MILA KASAN, PATENT DEPT.
APPLIED BIOSYSTEMS
850 LINCOLN CENTRE DRIVE
FOSTER CITY, CA 94404

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| EXAMINER |
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SNAY, JEFFREY R

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| ART UNIT | PAPER NUMBER |
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1743

DATE MAILED: 09/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Supplemental
Notice of Allowability**

Application No.

08/968,208

Examiner

Jeffrey Snay

Applicant(s)

HIGUCHI, RUSSELL

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to a telephone conference held September 1, 2004.
2. ☒ The allowed claim(s) is/are 30, 31, 35-37, 48, 39-40, 44-46 and 49; renumbered 1-12, respectively.
3. ☒ The drawings filed on 17 March 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Jill A. Warden
SPE
Art Unit: 1743

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

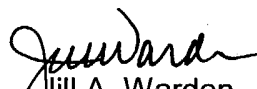
Authorization for this examiner's amendment was given in a telephone interview with Vincent Powers on September 2, 2004.

The application has been amended as follows:

After discussions with applicants' representative on the meaning of "thermal cyclor", applicants' representative and Examiner Warden agreed to amend the independent claims to recite an "automated thermal cyclor" in order to resolve any ambiguity. Previously cancelled claims 38 and 47 are being reinstated as new claims 48 and 49 because computer control is not required by such automation. A minor correction is also being made to claim 36.

A complete listing of the claims is attached hereto.

Any inquiry concerning this communication should be directed to Jill A. Warden at telephone number (571) 272-1267.


Jill A. Warden
SPE
Art Unit 1743

AMENDMENT**Listing of the Claims (new text is underlined, deleted text is bracketed)**

1-29. (Canceled)

1 ~~30~~. (Currently Amended) An instrument for use in monitoring a nucleic acid amplification reaction comprising multiple thermal cycles, comprising:

(a) [a] an automated thermal cycler capable of alternately heating and cooling, and adapted to receive, at least one reaction vessel containing an amplification reaction mixture comprising a target nucleic acid, reagents for nucleic acid amplification, and a detectable nucleic acid binding agent; and

(b) a detector operable to detect a fluorescence optical signal while the amplification reaction is in progress and without opening the at least one reaction vessel, which fluorescence optical signal is related to the amount of amplified nucleic acid in the reaction vessel.

2 ~~31~~. (Previously Presented) The instrument of claim ~~30~~, wherein the thermal cycler is adapted to receive a plurality of reaction vessels, each containing an amplification reaction mixture.

32-34. (Canceled)

3 ~~35~~. (Previously Presented) The instrument of claim ~~30~~, wherein the detector is operable to detect a fluorescence optical signal at a wavelength at or about 570 nm.

4 ~~36~~. (Currently Amended) The instrument of claim ~~30~~, which includes a sealed light transmission path between the reaction vessel and the detector.

5 ~~37~~. (Previously Presented) The instrument of claim ~~36~~, wherein the sealed light transmission path is a fiber optic cable.

38. (Canceled)

7 ~~39~~. (Currently Amended) A system for use in monitoring a nucleic acid amplification reaction comprising multiple thermal cycles, comprising:

(a) at least one reaction vessel adapted to contain an amplification reaction mixture comprising a target nucleic acid, reagents for nucleic acid amplification, and a detectable nucleic acid binding agent;

(b) [a] an automated thermal cycler capable of alternately heating and cooling such a reaction vessel, and

(c) a detector operable to detect a fluorescence optical signal while the amplification reaction is in progress and without opening the at least one reaction vessel, which fluorescence optical signal is related to the amount of amplified nucleic acid in the reaction vessel.

8 ~~40~~ (Previously Presented) The system of claim ~~39~~⁷, wherein the system comprises a plurality of reaction vessels, each adapted to contain an amplification reaction mixture.

41-43. (Canceled)

9 ~~44~~ (Previously Presented) The system of claim ~~39~~⁷, wherein the detector is operable to detect a fluorescence optical signal at a wavelength at or about 570 nm.

10 ~~45~~ (Previously Presented) The system of claim ~~39~~⁷, wherein the at least one reaction vessel includes a clear or translucent cap optically coupled to the detector by a sealed light transmission path.

11 ~~46~~ (Previously Presented) The system of claim ~~45~~¹⁰, wherein the sealed light transmission path is a fiber optic cable.

47. (Canceled)

6 ~~48~~ (New) The instrument of claim ~~30~~¹, wherein the thermal cycler is computer-controlled.

12 ~~49~~ (New) The system of claim ~~39~~⁷, wherein the thermal cycler is computer-controlled.